

The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

Mr. Frederick Kendall
4739 W Arnette Circle
Glendale, AZ 85308-3401

Re: Bethlehem Dam
Dam #025.01

ADMINISTRATIVE ORDER
No. 04-26

December 28, 2004

A. INTRODUCTION

This Administrative Order is issued by the Department of Environmental Services, Water Division to Mr. Frederick Kendall pursuant to RSA 482:12 and RSA 482:87. This Administrative Order is effective upon issuance.

B. PARTIES

1. The Department of Environmental Services, Water Division ("DES"), is a duly constituted administrative agency of the State of New Hampshire, having its principal office at 29 Hazen Drive, Concord, NH 03302-0095.
2. Mr. Frederick Kendall is an individual having a mailing address of 4739 W Arnette Circle, Glendale, AZ 85308-3401

C. STATEMENTS OF FACTS AND LAW

1. Pursuant to RSA 482, DES regulates the construction and maintenance of dams so as to meet the stated statutory objectives, including the regulation of water levels, the lessening of flood damage, and the enhancement of public safety. Pursuant to RSA 482:87, the Commissioner of DES has adopted NH Admin. Rules Env-Wr 100-700 to implement this program.
2. RAS 482:11-A requires the owner of a dam to maintain and repair the dam so that it does not become in disrepair.
3. Mr. Frederick Kendall owns Bethlehem Dam in Bethlehem, NH, further identified in DES records as Dam #025.01 ("the Dam"). Mr. Frederick Kendall (the "Owner") has acknowledged ownership of the Dam in a correspondence to the Water Division dated March 20, 2001 regarding the submittal of his annual dam registration fee.
4. RSA 482:12 requires DES to periodically inspect all dams in the state which may pose a menace to public safety, and to take action to ensure that the dam is repaired or reconstructed if the inspection indicates that the public safety so requires.

5. RSA 482:2, V defines a "dam in disrepair" as a dam which is a menace to public safety and is incapable of safely impounding flood waters to its crest, or is incapable of maintaining a reasonably constant level of waters impounded or which does not contain adequate gates and sluiceways to provide for the holding or controlled discharge of waters impounded.

6. Env-Wr 101.21 defines "menace to public safety" as any dam whose failure would threaten life or property. Property, when used in this context, means buildings, structures or other real estate.

7. Env-Wr 101.03 (b) defines "Class AA Structure" as a dam with no hazard potential, the failure of which would not threaten life or property and... "is not greater than 25 feet in height with a storage capacity greater than 15 acre-feet".

8. Env-Wr 101.04 (a) defines "Class A Structure" as a dam with a low hazard potential, the failure of which would not result in possible loss of life as defined by Env-Wr 101.29.

9. The Dam has a measured height of 29 feet and a calculated maximum storage capacity of 116 acre-feet and, therefore, does not meet the criteria of Env-Wr 101.03 (b).

10. In accordance with Env-Wr 301.03, and because the Dam does not meet the criteria of Env-Wr 101.03 (b), DES has classified the Dam as a Class A, low hazard potential structure.

11. In December 1993, the Owner and Mr. Henry Dux purchased the Dam. They became the new joint owners of the Dam. A brief history of outstanding issues at that time included:

- a. On July 18, 1974, NH Water Resources Board inspects Dam and remarks that the concrete around gatehouse is eroded.
- b. On December 6, 1974 a letter is sent to the Richard Polonsky (past owner) stating that Dam was inspected and it appears that the gate section and the penstock are inoperative. Repairs are necessary.
- c. On July 8, 1980 the Water Resources Board, after review of the April 1979 Army Corps of Engineers, Phase I Inspection Report, issues a Board Order to Richard Polonsky (past owner) to make the following repairs:
 - i. Remove trees/brush;
 - ii. Provide and Operation and Maintenance Plan;
 - iii. Repair deteriorated concrete;
 - iv. Replace embankment material to ensure stability;
 - v. Perform analysis of the integrity of the spillway chambers;
 - vi. Perform analysis of the stability of the spillway chambers with the amount of sedimentation that has built up; and
 - vii. Restore gates to an operable condition.
- d. On May 14, 1981, a follow up inspection to the Board Order was performed by the Water Resources Board. No items were completed.
- e. On August 27, 1982, a follow up inspection to the Board Order was performed by

the Water Resources Board. No items were completed. In an August 2, 1982 letter, Richard Polonsky (past owner) states that some repairs have been initiated and that remainder of repairs will be addressed when contract for hydro operations is in place.

- f. On September 10, 1982, Water Resources Board issues a letter to Richard Polonsky (past owner) stating that the order is still outstanding and they would give him 30 days to present information, which would support granting an extension.
- g. On February 22, 1983, the Board Order deadline is extended to September 1983.
- h. On September 20, 1983, Richard Polonsky (past owner) states that he is no longer going to have the site developed for hydro operations and is looking to sell the Dam.
- i. On September 28, 1983, the 1980 Board Order is amended to allow more time for Richard Polonsky (past owner) to dispose of the structure before more stringent repair or removal requirements are enforced. The Board Order was amended to state that, pending disposal or repair of the structure, the Dam could remain in its present condition until July 1, 1984.

12. In 1996 the Owner and Mr. Paul Skoropowski became new joint owners of the Dam.

13. On June 10, 1997 a Letter of Deficiency was issued. The Owner and Mr. Paul Skoropowski were given the option to make repairs or remove the Dam. The outstanding items at that time included:

- a. Tree and brush growth on the earth abutments;
- b. Deteriorated concrete on the right core wall and the downstream training walls;
and
- c. No Operation and Maintenance plan on file.

14. On August 27, 1997, a follow up inspection was performed and revealed that no work had been done. The Owner and Mr. Paul Skoropowski request an extension to October 1, 1997. The extension was granted.

15. On September 23, 1997 the Owner and Mr. Paul Skoropowski, requested relief from the requirements imposed by the June 30, 1997 LOD. Their request was not granted. They state that because of the economic and time constraints, they will not be able to meet the deadlines in the June 30, 1997 LOD. They requested another extension to complete the concrete repairs during low water 1998 and agreed to keep the Dam open and no longer impounding water. The extension was granted.

16. On August 31, 1998 a follow up inspection was performed. No work had been done. DES requested written notification on the status of the concrete repairs.

17. On September 17, 1998, the Owner requested an extension on concrete repairs to June 1999. Extension was granted.

18. On August 1999, the Owner called DES and stated that after spring runoff, he will run a 5'

pipe through old penstock and indicated that no concrete repairs had yet been done.

19. In March of 2002, Mr. Paul Skoropowski's returned his Annual Dam Registration Fee bill with a note indicating that the Owner bought his share of the Dam.

20. On October 17, 2002, DES performed a scheduled inspection of the Dam and it was found that no concrete work had been done and that the impoundment was extensively silted in. The following is a complete list of the items noted upon file review and visual inspection at that time:

- a. The earthen material is not level with the downstream side of the concrete retaining wall, located to the right of the gate house;
- b. The concrete on the downstream face of the spillway is deteriorated;
- c. The entire concrete structure of the sluiceway has severe concrete deterioration, including the downstream right and left abutments, the inside walls, and the upstream face. Large portions of rebar are showing and it appears that the inside right wall has deteriorated enough such that there is a hole through to the abutting stoplog bay;
- d. There is concrete deterioration on the upstream face of the gatehouse;
- e. The earthen material is not flush with the left spillway abutment;
- f. There was light tree and brush growth on and within 15 feet of the Dam.
- g. There are questions in previous reports as to the structural integrity of the concrete of the spillway chambers (Dam is an Ambursen type structure). It has been noted that the chambers contain sediment, which may or may not have come from the spillway's foundation. The interior sections of the spillway were not accessible at the time of inspection;
- h. There is an excessive amount of sedimentation built up on the upstream side of the spillway;
- i. The gates are not operable;
- j. The Dam has heavy traffic from trespassers and is a high risk for injuries to those that are trespassing;
- k. The operation and maintenance plans needs to be updated.

D. DETERMINATION OF VIOLATIONS

1. The Owner has violated RSA 482:11-a by failing to maintain the Dam to prevent it from becoming a "dam in disrepair".

E. ORDER

Based on the above findings, DES hereby orders the Owner as follows:

1. Within 30 days from receipt of this Order begin a regimen of diligent monitoring and operation of all outlets to ensure maximum discharge through the Dam to reduce the frequency and duration of water storage. Provide DES with a detailed description of such outlets, as well as a written monitoring and maintenance plan. The plan, when approved by DES, will remain in place and the Owner shall perform monitoring and maintenance in strict accordance with the

approved plan until such time as compliance with items E.2 through E.5 (Dam reconstruction) **OR** E.6 and E.7 (Dam removal) of this Order has been achieved.

If the Owner elects to repair the Dam pursuant to Item E.1, then the Owner must address Item E.2 through E.5, below:

2. **By March 1, 2005** Retain the services of a Professional Engineer licensed in the State of New Hampshire who shall submit a schedule to DES for the investigation and analysis of the Dam to address the information in item E.3 below.
3. **By September 1, 2005** Submit to DES an engineering report as completed by a New Hampshire Licensed Professional Engineer with results and recommendations from structural, hydrologic, and hydraulic analyses of the Dam. The report shall include an assessment of all portions of the Dam and its appurtenances, including stability under anticipated loading conditions, as well as conceptual reconstruction options for the Dam.
4. **By December 1, 2005** Submit design plans, specifications, and any required DES permit applications for the reconstruction of the Dam to meet current DES standards for a Class A dam.
5. **By December 1, 2006** Complete the reconstruction of the Dam in accordance with the approved plans, specifications, and permit conditions.

If the Owner elects to remove the Dam pursuant to Item E.1, then the Owner must address Item E.6 and E.7, below:

6. **By December 1, 2005** Submit design plans, specifications and any required DES permit applications for the removal of the Dam.
7. **By December 1, 2006** Remove the Dam in accordance with the approved plans, specifications, and permit conditions.

Send correspondence, data, reports, and other submissions made in connection with this Administrative Order, **other than appeals**, to DES as follows:

Grace Levergood, P.E., Dam Safety Engineer
DES Water Division
6 Hazen Drive
Concord, NH 03301
Fax: (603) 271-7894
E-mail: glevergood@des.state.nh.us

F. APPEAL

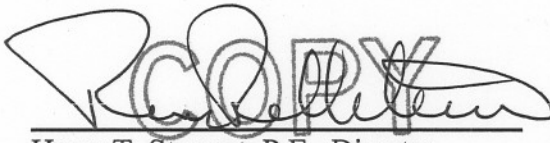
Any person aggrieved by this Order may appeal the Order to the Water Council by filing an appeal that meets the requirements specified in Env-Wc 200 within 30 days of the date of this

Order. Copies of the rule are available from the DES Public Information Center at (603) 271-2975 or at <http://www.des.state.nh.us/desadmin.htm>. Appealing the Order does not automatically relieve The Owner of the obligation to comply with the Order.

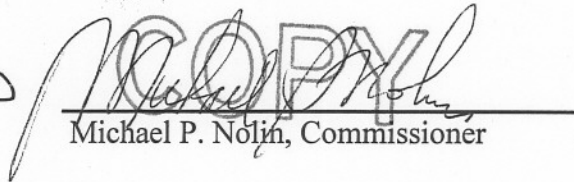
G. OTHER PROVISIONS

Please note that RSA 482:89 provides for administrative fines and criminal penalties for the violations noted in this Order. DES will continue to monitor the Owner's compliance with applicable requirements and will take appropriate action if additional violations are discovered.

This Order is being recorded in the Grafton County Registry of Deeds so as to run with the land.

A large, stylized signature of Harry T. Stewart in black ink, written over a horizontal line. The word "COPY" is printed in large, bold, capital letters across the signature.

Harry T. Stewart, P.E., Director
Water Division

A large, stylized signature of Michael P. Nolin in black ink, written over a horizontal line. The word "COPY" is printed in large, bold, capital letters across the signature.

Michael P. Nolin, Commissioner

Certified Mail/RRR:7000 1670 0000 0588 5724

cc: Gretchen R. Hamel, DES Legal Unit ✓
Public Information Officer, DES PIP Office
NH AGO
Town of Bethlehem
GEL/HTS/MPN/h:/safety/wendy/ao/02501AOgel-snd-jwg.doc